REMARKS

This is intended as a full and complete response to the Office Action dated December 4, 2003, having a shortened statutory period for response set to expire on March 4, 2004. Claims 1-24 and 40-51 stand rejected by the Examiner and are shown above. Claims 25-39 and 52-55 stand withdrawn by the Examiner. Applicants cancel claims 25-39 and 52-55 without prejudice. Reconsideration of the rejected claims is requested for reasons presented below.

In the specification, the paragraphs **[0036]**, **[0039]**, and **[0104]**, and **[0123]** have been amended to clarify the status of patent applications incorporated by reference.

Claims 1-24, and 40-51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Sandhu et al.* U.S. Patent No. 6,099,604 in view of *Mayer et al.* U.S. Patent No.6,315,883 and *Uzoh et al.* U.S. Patent No. 5,807,165. The Examiner asserts that it would have been obvious to one of ordinary skill in the art to have combined the CMP teaching of *Sandhu et al.* with the ECP teaching of *Mayer et al.* to create a faster method of ECMP as taught by *Uzoh et al.* Applicant respectfully responds to the rejection.

Sandhu et al. discloses a slurry composition including a solvent, abrasive particles, and a chelating agent to chemical mechanical polish a substrate surface with the chelating agents reacting with polish-resistant surface moieties to render the polish-resistant surface moieties easier to remove. *Sandhu et al.* does not suggest or motivate forming a passivation layer and does not suggest or motivate applying a bias to a substrate surface.

Mayer et al. discloses masking regions of a wafer surface during electropolishing by forming a diffusion barrier film using concentrated phosphoric acid and certain polymers. *Mayer et al.* does not suggest or motivate contacting the substrate surface with a polishing article in the electrolyte solution.

Uzoh et al. discloses removing a copper material substantially using a slurry comprising surfuric acid, hydrogen peroxide, benzotriazole, and a non-ionic surfactant in combination with water and silica.

Therefore, the combination of *Sandhu et al.*, *Mayer et al.*, and *Uzoh et al.* does not teach, show, or suggest exposing the substrate to a phosphoric acid based electrolyte solution, wherein the phosphoric acid based electrolyte solution further comprises a corrosion inhibitor and a chelating agent, forming a passivation layer on a substrate surface, contacting the substrate surface with a polishing article in the electrolyte solution, applying an anodic bias to the substrate surface, and removing material from at least a portion of the substrate surface, as recited in claim 1 and claims dependent thereon. Withdrawal of the rejection is respectfully requested.

Further, the combination of *Sandhu et al.*, *Mayer et al.*, and *Uzoh et al.* does not teach, show, or suggest exposing the substrate to a phosphoric acid based electrolyte solution, wherein the phosphoric acid based electrolyte solution further comprises a corrosion inhibitor and a chelating agent, forming a passivation layer on a substrate surface, contacting the substrate surface with a polishing article in the electrolyte solution, applying an anodic bias to the substrate surface, and removing material from at least a portion of the substrate surface, wherein the passivation layer is formed by a viscous forming agent, as recited in claim 5 and claims dependent thereon. Withdrawal of the rejection is respectfully requested.

Additionally, the combination of *Sandhu et al.*, *Mayer et al.*, and *Uzoh et al.* does not teach, show, or suggest positioning the substrate in a phosphoric acid based electrolyte solution adjacent a polishing article, exposing the substrate to a corrosion inhibitor and a chelating agent disposed in the phosphoric acid based electrolyte solution, forming a current suppressing layer on a substrate surface, contacting the substrate in the electrolyte solution with the polishing article to remove at least a portion of the current suppressing layer, applying a bias between the polishing article contacting the substrate and a cathode disposed in the electrolyte solution, and removing material from at least a portion of the substrate surface with an anodic dissolution process, as recited in claim 15 and claims dependent thereon. Withdrawal of the rejection is respectfully requested.

The combination of *Sandhu et al.*, *Mayer et al.*, and *Uzoh et al.* does not teach, show, or suggest positioning the substrate in an electrolyte solution adjacent a polishing article, wherein a portion of a substrate surface comprises a conductive material and the

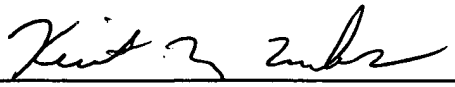
electrolyte solution comprises a phosphoric acid based electrolyte, one or more corrosion inhibitors selected from the group of benzotriazole, mercaptobenzotriazole, 5-methyl-1-benzotriazole, and one or more chelating agents selected from the group of tetraethylenepentamine, triethylenetetramine, diethylenetriamine, ethlylenediamine, amino acids, ammonium oxalate, ammonia, ammonium citrate, citric acid, and ammonium succinate, forming a current suppressing layer, contacting the substrate in the electrolyte solution with the polishing article to remove at least a portion of the current suppressing layer and expose a portion of the conductive material, applying a bias between an anode and a cathode disposed in the electrolyte solution; and removing material from the exposed portion of the conductive material by anodic dissolution and mechanical contact with the polishing article, as recited in claim 40 and claims dependent thereon. Withdrawal of the rejection is respectfully requested.

The combination of *Sandhu et al.*, *Mayer et al.*, and *Uzoh et al.* does not teach, show, or suggest introducing a substrate into a phosphoric acid based electrolyte, forming a passivation layer on a substrate surface by exposing a substrate surface to one or more corrosion inhibitors and one or more chelating agents disposed in the phosphoric acid based electrolyte, contacting a polishing article with the substrate in the electrolyte solution, applying an anodic bias to the substrate surface by biasing the polishing article and removing material from at least a portion of the substrate surface, as recited in claim 46 and claims dependent thereon. Withdrawal of the rejection is respectfully requested.

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to the Applicant's disclosure than the primary references cited in the office action. Therefore, Applicant believes that a detailed discussion of the secondary references is not necessary for a full and complete response to this office action.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed. Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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